

[0072] In those embodiments that may utilize the gooseneck hitch ball 448, the under bed hitch mounting system 30 may utilize the mid rail or adapter 45; exemplary embodiments of which are shown in FIGS. 13-16. The mid rail or adapter plate 45 may be of any appropriate shape or size, such as a generally rectangular or tubular shape that may generally span the length between the rails 40. The mid rail or adapter plate 45 may be configured to connect to the rails 40. The mid rail or adapter plate 45 may be attached to the rails by any appropriate means, such as with fasteners, welding or the like.

[0073] The adapter plate 45 may be of a generally one piece construction or may include several sections that may be secured together. The adapter plate 45 may include a center section 432 and one or more mounting sections 434 extending therefrom. By way of a non-limiting example, there may be two mounting sections 434. As an alternative, there may be no mounting sections 434, such that the center section 432 may be attached directly to the rails 40.

[0074] The center section 432 may be located between the mounting sections 434. The mounting sections 434 may extend at a downward angle and away from the center section 432, such that the center section 432 may be positioned above the mounting sections 434. The mounting sections 434 may extend in opposite directions away from the center section 432.

[0075] The mounting sections 434 may engage the rails 40 at any appropriate location, such as the underside 44 of the rails 40. The mounting sections 434 may be configured to connect to the rails 40 by any appropriate means, such as with fasteners, welding or the like. When the adapter plate 45 may be connected to the rails 40, the center section 432 may be approximately flush with and parallel to the rails 40. When the mounting section 434 may engage the rails 40, the mounting sections 434 may be approximately parallel to the rails 40. Each mounting section 434 may include one or more openings or rail mounting apertures 438. The mounting apertures 438 may be configured to align with mounting apertures 47 in the rails 40, shown in FIG. 4. The mounting apertures 438 may be of any appropriate shape or size, such as a generally circular, ovalar or rectangular shape.

[0076] The adapter plate or mid rail 45 may also include a base member 442. The base member 442 may be of any appropriate shape or size, such as a generally square, rectangular or tubular shape. The base member 442 may be attached to the bottom of the adapter plate or mid rail 45. The base member 442 may be attached to the mid rail 45 by any appropriate means, such as by welding, fasteners or the like. The base member 442 may also be secured to the rails 40, such as on the underside 44 of the rails 40.

[0077] The adapter plate or mid rail 45 may be configured to receive a hitch ball 448. By way of a non-limiting example, the center section 432 may include a hitch ball socket 450 that may be configured to receive the hitch ball 448. The hitch ball socket 450 may be of any appropriate shape or size, such as a generally cylindrical shape. The hitch ball socket 450 may be located at any appropriate position on the adapter plate 45, such as the approximate center of the adapter plate 45. By way of a non-limiting example, the hitch ball socket 450 may be configured to receive a removable hitch ball 448 with spring-loaded ball bearings. It should be appreciated, however, that the recep-

tacle 450 may be configured to receive any appropriate type of hitch ball 448 and should not be limited to that shown or described herein.

[0078] Apertures may be drilled in the load bed 32 of the towing vehicle 34 that may generally correspond to the locations of the sockets 73 in the rails 40 and the hitch ball socket 450. A fifth wheel hitch may be removably connected to the sockets 73 in the rails 40 through the apertures located in the load bed 32. A hitch ball 448 may be removably connected to the hitch ball socket 450 through the aperture 455 in the load bed 32, whereby a gooseneck hitch may be utilized.

[0079] In other embodiments shown in FIGS. 20-24, a receiving member 574 may include a channel member 576 and an accessory attachment member or puck member 578. In some embodiments, the receiving member 574 or more specifically, the channel member 576 may include a pair of legs that may be of a shape and size to permit the channel member 576 to generally fit within the socket 73 so that a top surface 586 of the channel member 576 may be generally flush or substantially flush with the top surface 42 of the rails 40. In other embodiments, the channel member 576 may not include legs. In these embodiments, however, the channel member 576 may be attached to the rails 40 by any appropriate method, such as by way of a non-limiting example, welding, using fasteners, or the like.

[0080] Once attached, the channel member 567 may be generally shorter than the bottom side of the load bed 32 of the towing vehicle 34. This may result in being capable of attaching the under bed hitch mounting system 30 with the channel member 576 being attached to the towing vehicle 34 and not having to create apertures in the load bed 32 if they may be undesired. In addition, certain of the apertures may not be needed if only a gooseneck option was chosen, i.e., only needing three of the five apertures.

[0081] The channel member 576 may further include a pair of locking apertures 592 and a recessed portion 585. In some embodiments, the channel member 576 may include a pair of recessed portions 585 as shown in FIG. 24. The puck member 578 may include a locking mechanism 593 such as a locking pin 597 as shown in FIG. 24, a flange 595 and a center section recess 598. In some embodiments, the puck member 578 may include a pair of flanges 595 that may be correspondingly shaped and sized to the recessed portions 585 of the channel member 576. In these embodiments, the puck member 578 may be attached to the channel member 576 by generally aligning the flanges 595 with the recessed portions 585 and inserting the puck member 574 relative to the channel member 576. This may secure the puck member 578 to the channel member 576.

[0082] More specifically, the channel member 576 may include a channel 600 positioned therein. Once the puck member 578 may be inserted into the channel member 576 and rotated, the flanges 595 of the puck member 578 may be rotated to be positioned within the channel 600, which may generally prevent the puck member 578 from being removed. In these embodiments, the puck member 578 may be rotated approximately a quarter turn, i.e., 90 degrees, to be locked into place. As shown in FIGS. 20-23, the flanges 595 may become generally misaligned with the recessed portions 585 and the flanges 595 may engage the channel 600 of the channel member 576 selectively attaching the puck member 578 to the channel member 576.